

# Noise

## Mitigation Monitoring Report



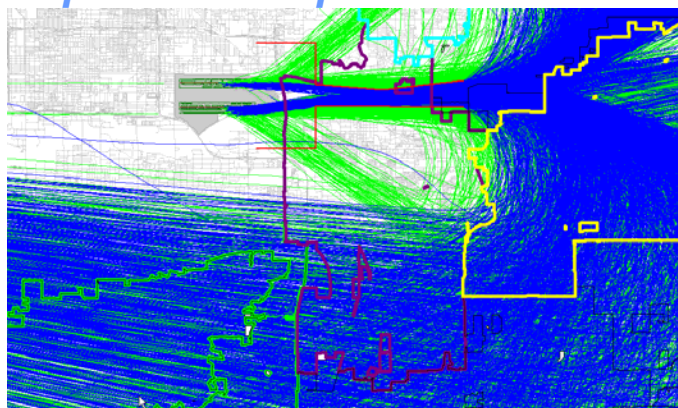
June 2008

### *Most Compliant Airline:*

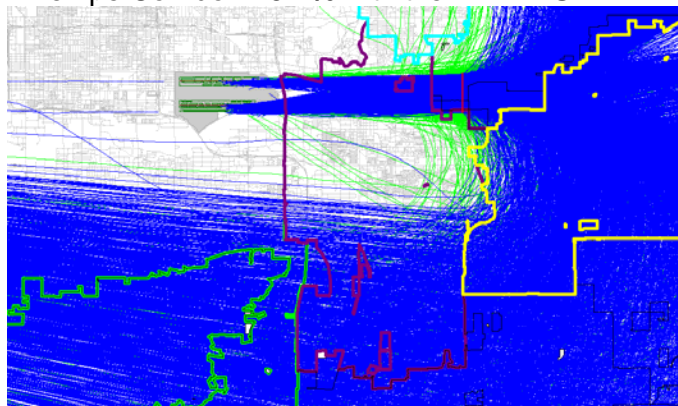
**Aero Mexico**  
59%

Learn about noise  
mitigation procedures  
over Tempe on p.7

### *Departure Compliance*



Tempe Corridor: **45.1%** with the 4-DME SID



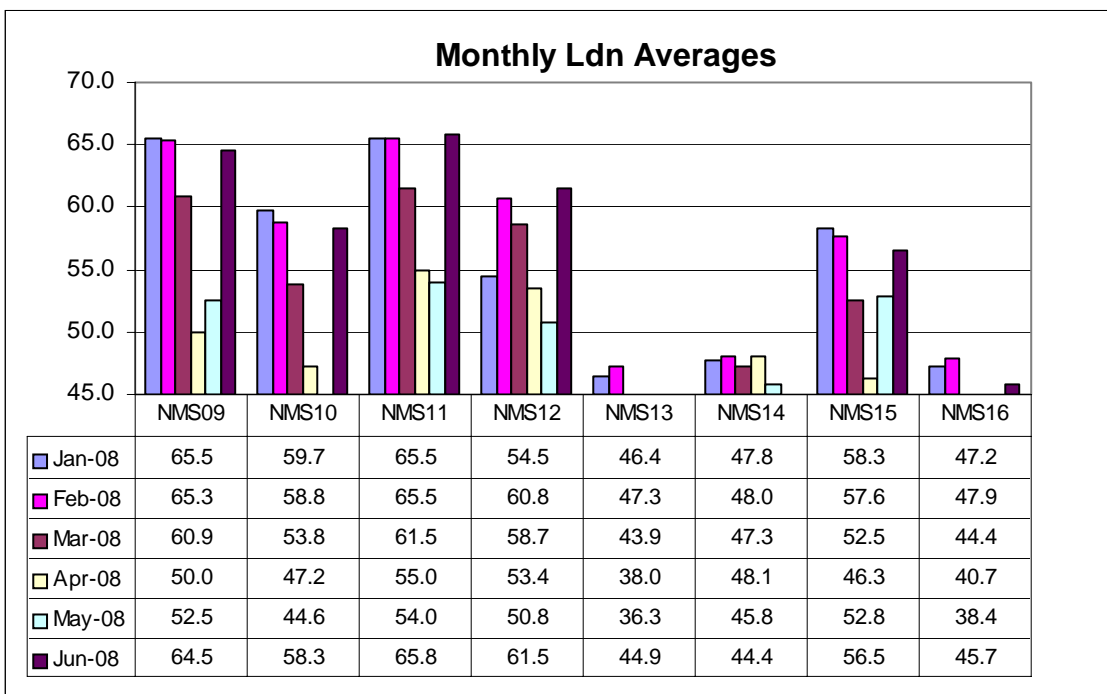
Phoenix Gate: **97.3%** with the 4-DME SID



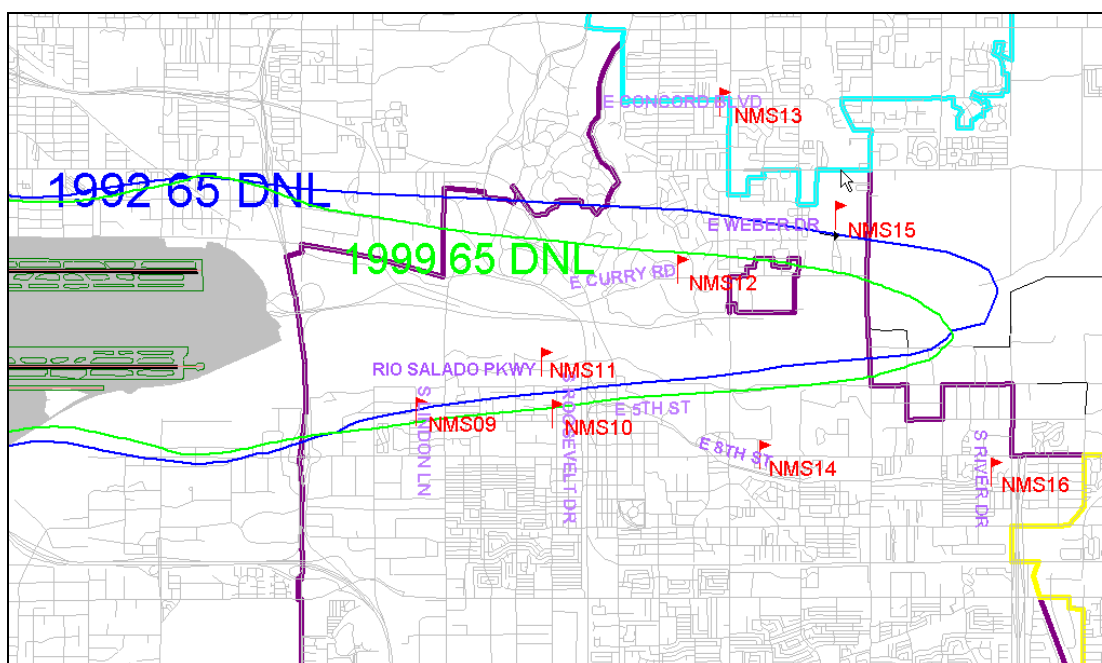
Tempe Aviation Commission

This report is assembled for the Tempe Aviation Commission (TAVCO) to monitor the monthly compliance of operations at Phoenix Sky Harbor International Airport with certain noise mitigation flight procedures over the City of Tempe. TAVCO consists of 13 Tempe residents appointed by the Tempe Mayor with approval of the City Council to assist and advice on aviation noise and other issues relating to the Phoenix Sky Harbor International Airport, which is owned and operated by the City of Phoenix. The City of Tempe is located directly east of the airport's 3 parallel runways.

## Aircraft Noise Energy Levels:



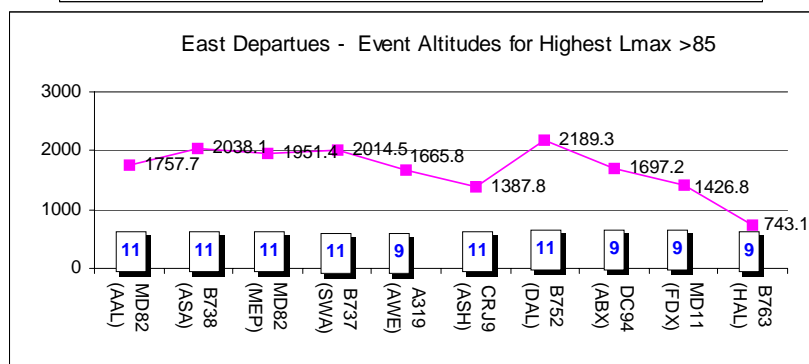
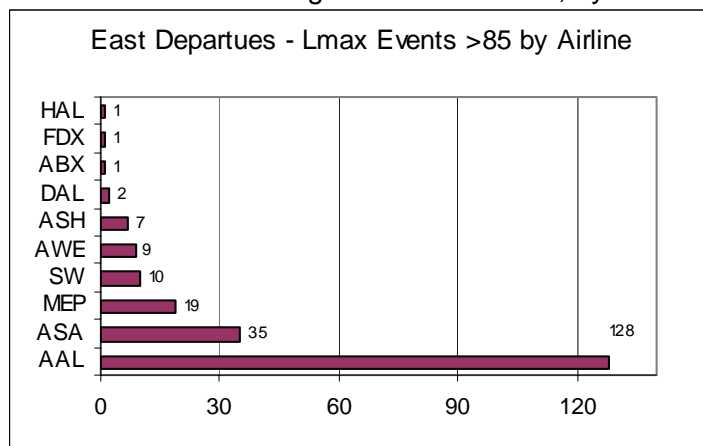
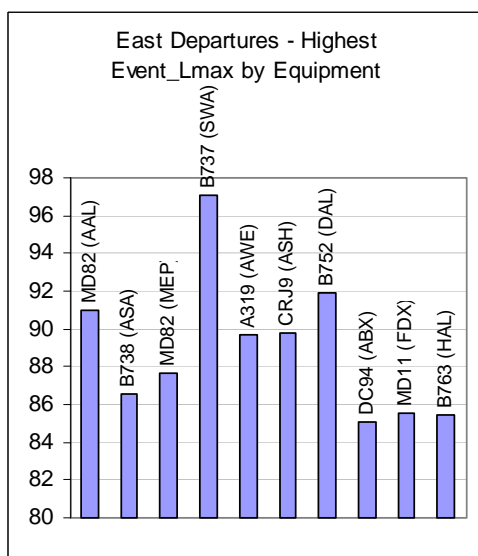
Ldn or day-night level (DNL), is a summary description of noise based on energy equivalent noise level (Leq) over the whole day with a penalty of 10 dB(A) for night time noise (22.00-7.00 hrs). DNL is used to forecast noise exposure contour lines around airports. The average monthly Ldn levels at Tempe monitoring sites in June were back to normal after a couple of month where just a few large turbojet departures produced high sound energy events.



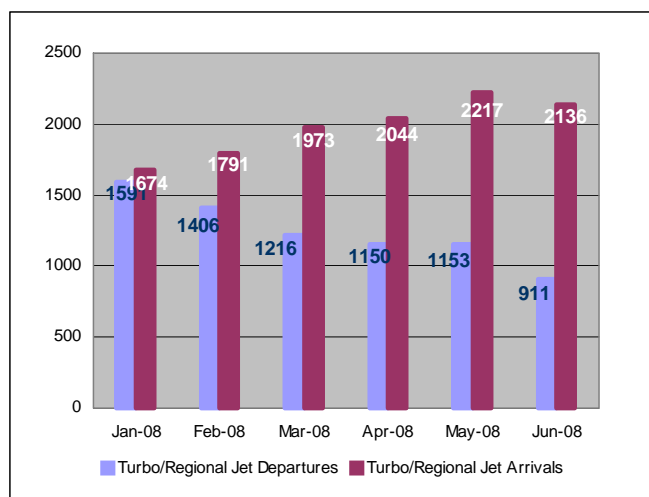
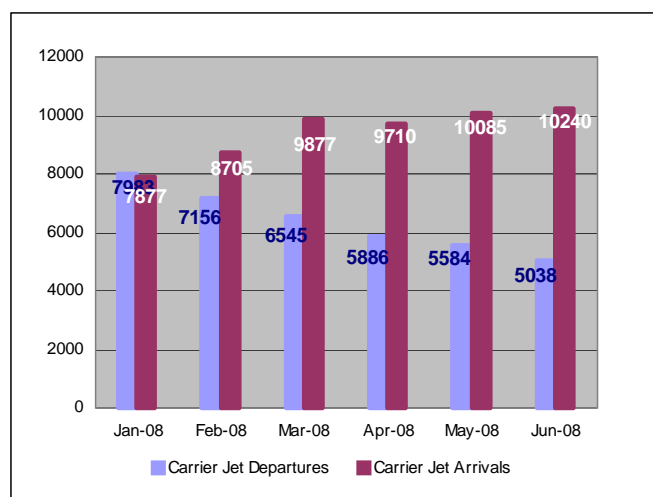
PHX Noise Monitor Sites and FAR Part 150 1992 and 1999 65 DNL contour lines in Tempe.

### Peak Noise Levels:

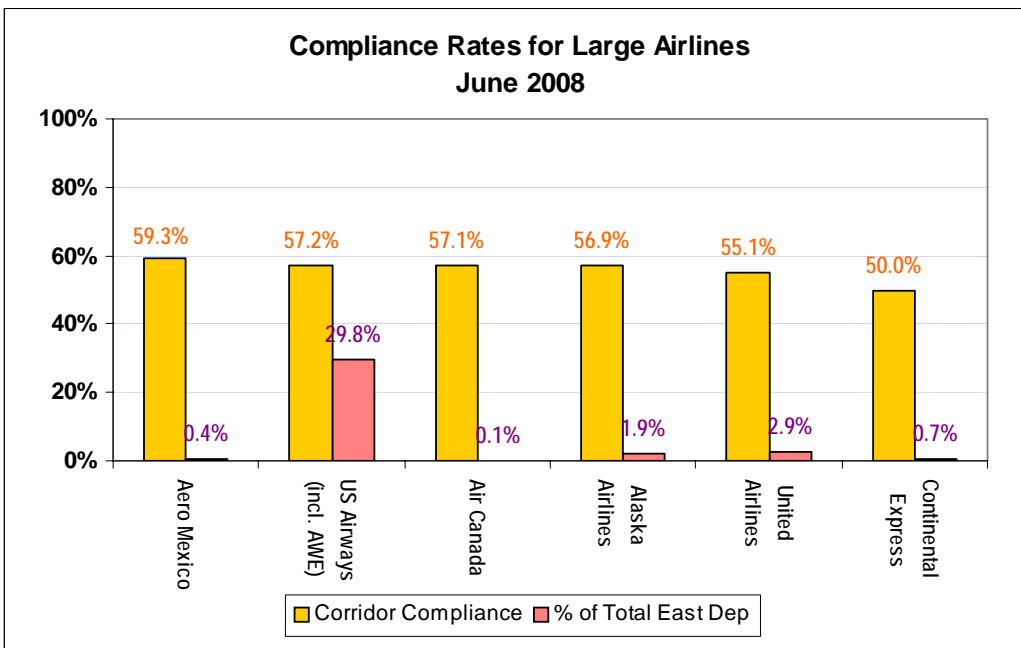
Lmax is the maximum sound level (dB) registered during a particular noise event. One aircraft departure, arrival or overflight typically results in noise events being registered at more than one monitoring site. The depicted maximum noise levels were registered at NMS 11, by Tempe Beach Park at West Rio Salado Parkway, and NMS 9, at the corner of West 5<sup>th</sup> Street and South Lindon Lane. Contrary to the last two previous months there were several departures that produced (Lmax) events >85 dB.



### East Operations Summary:

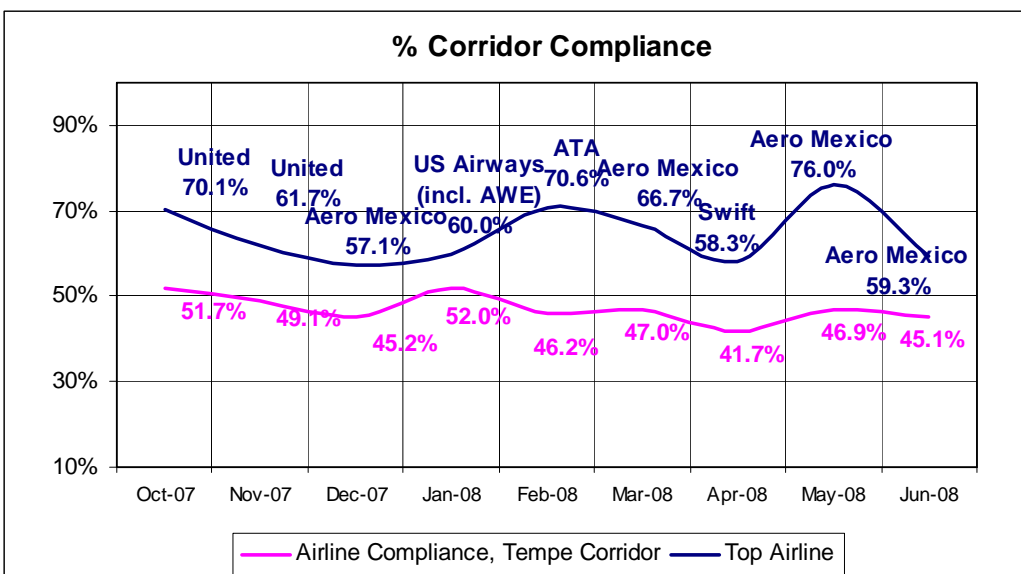
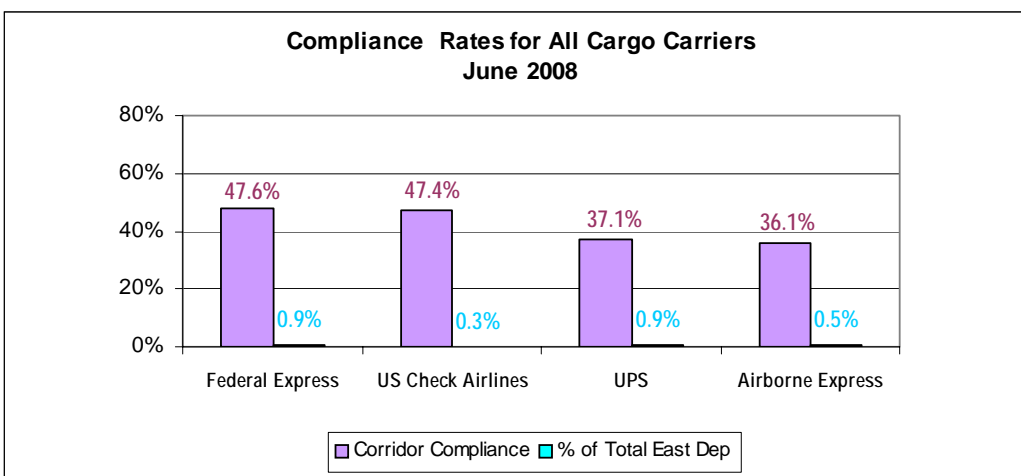


## Corridor Compliance with 4-DME Standard Instrument Departure procedure:

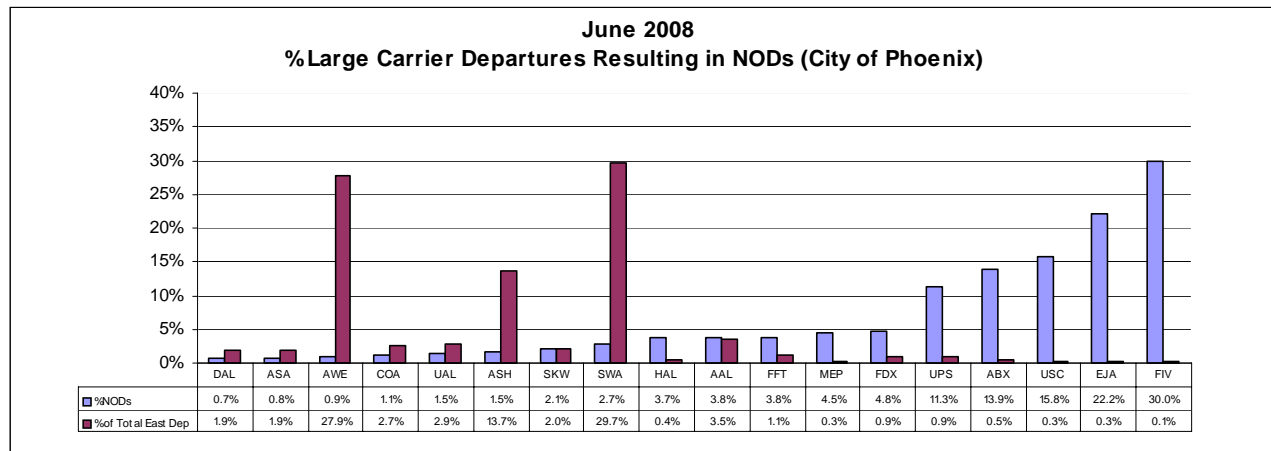


4-DME deviations during the following hours were identified by PHX as being weather impacted, and have not been included:

6/7 6:26 - 6:52  
 6/7 8:37 - 8:56  
 6/7 9:51  
 6/7 10:35 - 11:12  
 6/9 12:53  
 6/14 5:42 - 6:54  
 6/18 7:20  
 6/21 10:26  
 6/22 7:00 - 7:17  
 6/27 5:48  
 6/27 9:17-10:40  
 6/30 2:43



## Notices of Deviation:



Includes the following airlines with more than 10 departures to the east:

DAL Delta

UAL United

HAL Hawaiian

FDX Federal Express

EJA Executive Jet Aviation

ASA Alaska

ASH Mesa

AAL American

UPS United Parcel Service

FIV Citation Chares

AWE America West

SKW Sky West

FFT Frontier Airlines

ABX Airborne Express

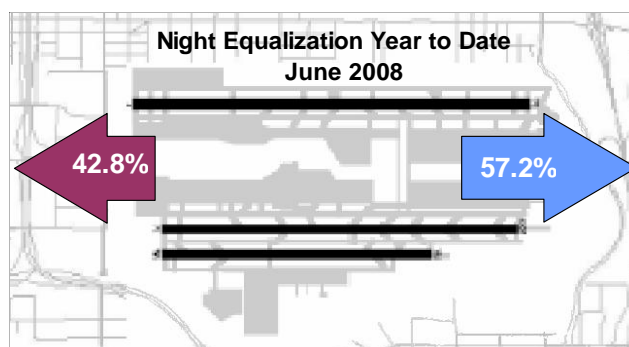
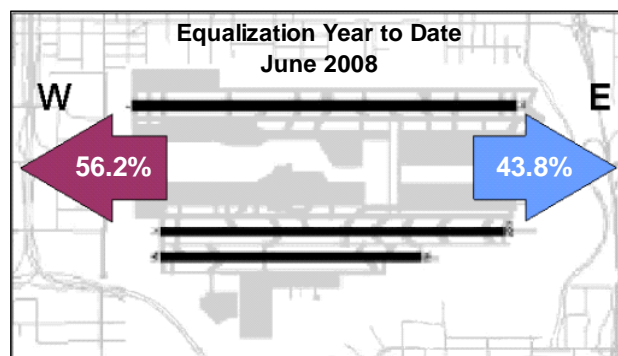
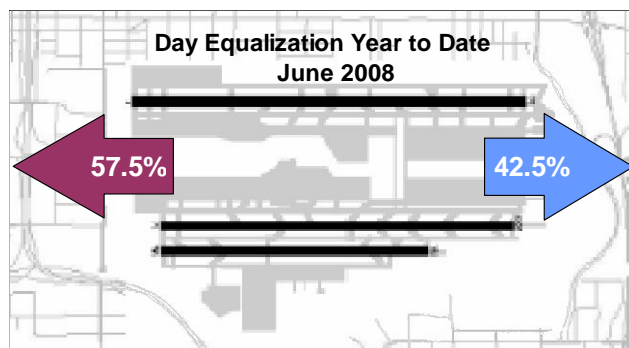
COA Continental

SWA Southwest

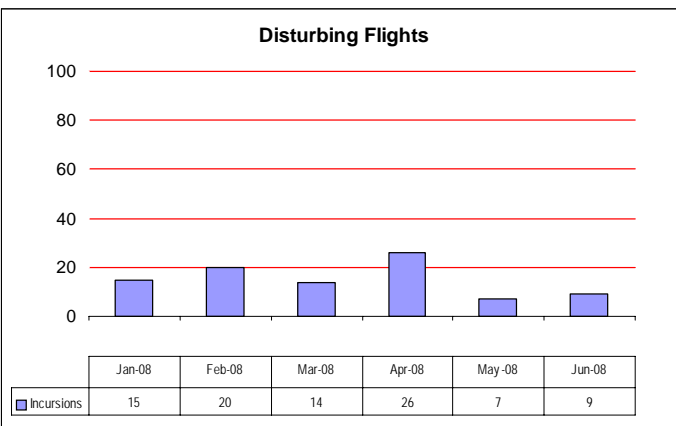
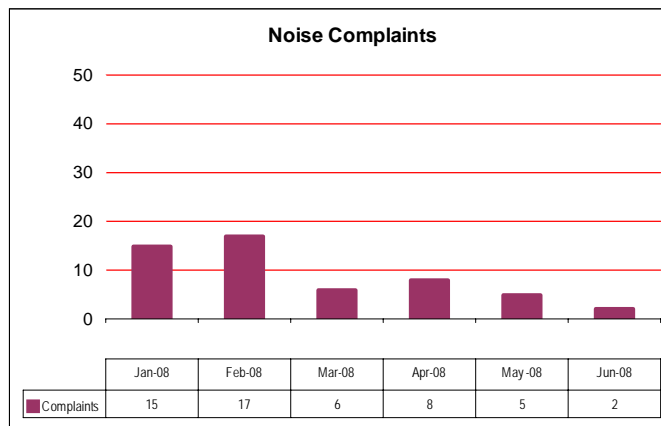
MEP Midwest Express

USC US Check

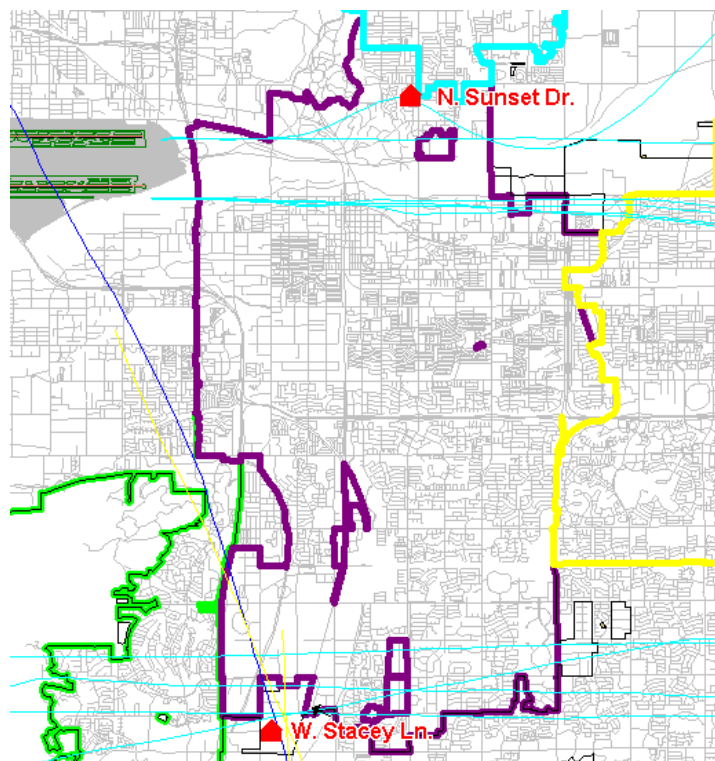
## East/West Departure Split:



## Received Complaints:



Incursions = Over flights identified to individual aircraft.



2 residents made complaints on aviation noise to the City of Tempe in June 2008, reporting:

- Low flying helicopters transitioning through neighborhood close to Priest Drive north of Ray Road during morning and evening hours.
- Southwest Airways B 737 slowing the approach to the north runway by making a loop over residential areas in north Tempe before landing.

A third complaint about excessive noise from fighter jets landing at Sky Harbor was received. Address or observation point was not given.

PHX departures: —  
 PHX arrivals: —  
 PHX airspace transition flights: —



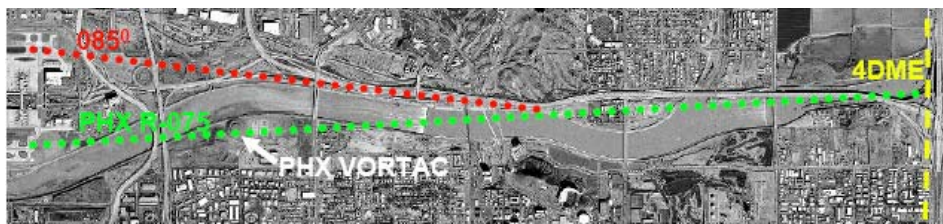
### IGA on Noise Mitigation Flight Procedures:

In 1994 the City of Phoenix and the City of Tempe agreed to continue noise mitigation flight procedures already in use over Tempe from the Phoenix Sky Harbor International Airport. The IGA was made after City of Tempe had challenged the plans for the construction of a third runway because of inadequate assessment of the environmental impacts, and the legal challenge was mediated and settled. The City of Phoenix agreed to submit a F.A.R. Part 150 Noise Compatibility study for the Phoenix Sky Harbor International Airport where the following agreed upon measures were included:

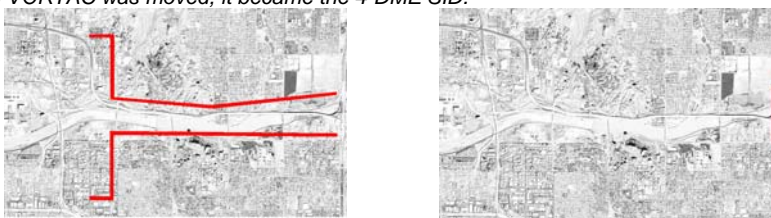
1. Have jet and large turboprop aircraft depart to the east over the Salt River.
2. On an annual basis equalize the noise burden from jet and large turboprop aircraft departures between east and west during daytime and nighttime hours.



3. The agreement also included a new procedure for mitigation noise from arriving jets and large turboprop aircraft to the proposed third runway (25L).



According to the 1993 Environmental Impact Statement for Phoenix Sky Harbor International Airport master plan improvements that included construction of the third runway, the 1-DME Standard Instrument Departure Procedure was to be continued for noise mitigation purposes. After the VORTAC was moved, it became the 4-DME SID.

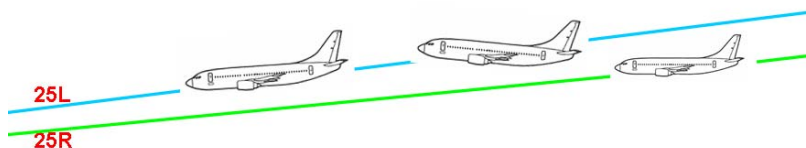


The Tempe Aviation Commission used the SID to come up with a "Corridor" to measure airline compliance with the 4-DME SID. The airport uses a 5,500 feet long imaginary line, "Gate", running north south at 4-DME or approximately at Price Road. Turns by carrier jets north or south away from the Salt riverbed before reaching this line results in a notice of deviation from the airport to the responsible airline.



On March 27, 2002 the FAA suspended formalization of a "side step" procedure that had been in use after the third runway opened in October 2000. Presently the FAA is clearing jets and large turboprop aircraft for straight-in approaches to Runway 25L from the east. 4 contributing factors led to negative effects on flight safety and the decision to suspend the side step procedure:

1. The destabilizing effect on the approach.
2. The inability to intercept the glide slope for the third runway.



Because the threshold for Runway 25L is located farther west than the threshold for Runway 25R, the glide slope is higher up than the glide slope to Runway 25R. Using the Runway 25R glide slope a pilot would need to apply power and both turn and climb close to landing to intercept the glide slope for Runway 25L when executing the side step maneuver when abeam Sun Devil Stadium.

3. Computer reprogramming going on in the cockpit.
4. Loss of visual reference, particularly at night (Sun Devil Stadium not always being lit).